

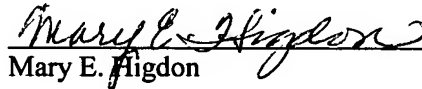
PATENT  
Attorney Docket No. RIB-007 (7995/11)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT(S): Wang et al.  
SERIAL NO.: 10/671,326 GROUP NO.: Not yet assigned  
FILING DATE: September 25, 2003 EXAMINER: Not yet assigned  
TITLE: BIFUNCTIONAL HETEROCYCLIC COMPOUNDS AND  
METHODS OF MAKING AND USING SAME

**CERTIFICATE OF FIRST CLASS MAILING UNDER 37 C.F.R. 1.8**

I hereby certify that this correspondence, and any document(s) referred to as enclosed herein, is/are being deposited with the United States Postal Service as first class mail, postage prepaid, in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 20th day of October, 2003.

  
Mary E. Higdon

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Submitted herewith is/are: Transmittal Form (1 pg.); Information Disclosure Statement (2 pgs.); Form PTO-1449 (3 pgs.); Copies of listed documents B1-B21 and C1-C10; and a Return Receipt Postcard.

**TRANSMITTAL  
FORM**



Application Serial Number	10/671,326
Filing Date	09/25/03
First Named Inventor	Wang et al.
Group Art Unit	Not yet assigned
Examiner Name	Not yet assigned
Attorney Docket No.	RIB-007 (7995/11)
Patent No.	Not applicable
Issue Date	Not applicable

**ENCLOSURES (check all that apply)**

<input type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Check Attached <input type="checkbox"/> Copy of Fee Transmittal Form  <input type="checkbox"/> Amendment/Response <input type="checkbox"/> Preliminary <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Letter to Official Draftsperson including Drawings [Total Sheets ____]  <input type="checkbox"/> Petition for Extension of Time  <input checked="" type="checkbox"/> Information Disclosure Statement <input checked="" type="checkbox"/> Form PTO-1449 <input checked="" type="checkbox"/> Copies of IDS Citations  <input type="checkbox"/> Certified Copy of Priority Document(s)  <input type="checkbox"/> Sequence Listing submission <input type="checkbox"/> Paper Copy/CD <input type="checkbox"/> Computer Readable Copy <input type="checkbox"/> Statement verifying identity of above	<input type="checkbox"/> Copy of Notice to File Missing Parts of Application  <input type="checkbox"/> Formal Drawing(s)  <input type="checkbox"/> Request For Continued Examination (RCE) Transmittal  <input type="checkbox"/> Power of Attorney (Revocation of Prior Powers)  <input type="checkbox"/> Terminal Disclaimer  <input type="checkbox"/> Executed Declaration and Power of Attorney for Utility or Design Patent Application  <input type="checkbox"/> Small Entity Statement  <input type="checkbox"/> CD(s) for large table or computer program  <input type="checkbox"/> Amendment After Allowance  <input type="checkbox"/> Request for Certificate of Correction <input type="checkbox"/> Certificate of Correction (in duplicate)	<input type="checkbox"/> Notice of Appeal to Board of Patent Appeals and Interferences  <input type="checkbox"/> Appeal Brief (in triplicate)  <input type="checkbox"/> Status Inquiry  <input checked="" type="checkbox"/> Return Receipt Postcard <input checked="" type="checkbox"/> Certificate of First Class Mailing under 37 C.F.R. 1.8  <input type="checkbox"/> Certificate of Facsimile Transmission under 37 C.F.R. 1.8  <input type="checkbox"/> Additional Enclosure(s) (please identify below)
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**CORRESPONDENCE ADDRESS**

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 Testa, Hurwitz & Thibault, LLP  
 High Street Tower  
 125 High Street  
 Boston, MA 02110  
 Tel. No.: (617) 248-7000  
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**SIGNATURE BLOCK**

Date: October 20, 2003  
 Reg. No. 38,678  
 Tel. No.: (617) 248-7317  
 Fax No.: (617) 248-7100

Respectfully submitted,

*D. A. Greenhalgh*  
 Duncan A. Greenhalgh  
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 125 High Street  
 Boston, MA 02110



PATENT  
Attorney Docket No. RIB-007 (7995/11)

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SERIAL NO.: 10/671,326 GROUP NO.: Not yet assigned  
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OF MAKING AND USING SAME

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir:

In accordance with the provisions of 37 C.F.R. 1.97 and 1.98, Applicants hereby make of record the patents and publications listed on the accompanying Form PTO-1449, and other information contained herein, for consideration by the Examiner in connection with the examination of the above-identified patent application. Pursuant to the Office's notice in the August 5, 2003 Official Gazette concerning the partial waiver under 37 CFR 1.98 (a)(2)(i), Applicants enclose copies of the listed foreign patent documents and publications. Applicants will provide the Office with copies of the listed U.S. patents and published U.S. patent applications upon request.

REMARKS

In accordance with the provisions of 37 C.F.R. 1.97, this statement is being filed (CHECK ONE):

- ☒ (1) within three (3) months of the **filing date** of a national application other than a continued prosecution application under 37 C.F.R. 1.53(d), or within three (3) months of the **date of entry of the national stage** as set forth in 37 C.F.R. 1.491 in an international application, or before the mailing of the **first Office action** on the merits, or before the mailing of a **first Office action** after the filing of a request for continued examination under 37 C.F.R. 1.114; or
- ☐ (2) after the period defined in (1) but before the mailing date of a **final action** or a **notice of allowance** under 37 C.F.R. 1.311, and
- ☐ the requisite Statement is below, **OR**
- ☐ the requisite fee under 37 C.F.R. 1.17(p), namely **\$180.00**, is included herein, or

- ☐ (3) after the mailing date of a **final action** or **notice of allowance** but before the payment of the **issue fee**, **AND**
- ☐ the requisite Statement is below, **AND**
- ☐ the requisite petition fee under 37 C.F.R. 1.17(p), namely **\$180.00** is included herein.

It is respectfully requested that each of the patents and publications listed on the attached Form PTO-1449, and other information contained herein, be made of record in this application.

### STATEMENT

As required under 37 C.F.R. 1.97(e), Applicant(s), through the undersigned, hereby state either that [check the appropriate space only if either (2) or (3) is checked on the previous page and the Statement is required]:

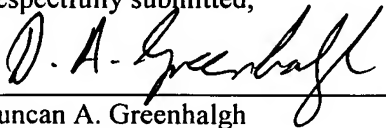
- ☐ 1. Each item of information contained in the Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application **not more than three months** prior to the filing of the Information Disclosure Statement; or
- ☐ 2. No item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing this Statement after making reasonable inquiry, no item of information contained in the Information Disclosure Statement was known to **any individual** designated in 37 C.F.R. 1.56(c) **more than three months** prior to the filing of the Information Disclosure Statement.


Date: October 20, 2003  
Reg. No. 38,678


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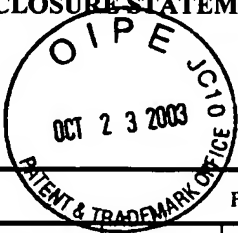
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Respectfully submitted,

  
\_\_\_\_\_  
Duncan A. Greenhalgh  
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High Street Tower  
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Boston, Massachusetts 02110

<b>FORM PTO - 1449</b> <b>INFORMATION DISCLOSURE STATEMENT</b>				<b>ATTORNEY DOCKET NO.: RIB-007</b> <b>APPLICANT(S): Wang et al.</b> <b>SERIAL NO.: 10/671,326</b> <b>FILING DATE: 09/25/03</b> <b>GROUP: Not yet assigned</b>			
 <b>U.S. PATENT DOCUMENTS</b>							
EXAM INIT.	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE	
	A1	3629232	12/21/71	Jones	260	210E	
	A2	4404201	09/13/83	Haskell et al.	424	246	
	A3	4546176	10/08/85	Machida et al.	544	21	
	A4	5180719	01/19/93	White et al.	514	192	
	A5	5232918	08/03/93	Arnould et al.	514	202	
	A6	5281703	01/25/94	White et al.	540	302	
	A7	5336768	08/09/94	Albrecht et al.	540	222	
	A8	5444051	08/22/95	Agouridas et al.	514	29	
	A9	5527780	06/18/96	Agouridas et al.	514	29	
	A10	5543400	08/06/96	Agouridas et al.	514	29	
	A11	5693791	12/02/97	Truett	540	222	
	A12	5747467	05/05/98	Agouridas et al.	514	29	
	A13	5780605	07/14/98	Or et al.	536	7.2	
	A14	5866549	02/02/99	Or et al.	514	29	
	A15	5891643	04/06/99	Fesik et al.	435	7.1	
	A16	5905144	05/18/99	Truett	536	22.1	
	A17	6034069	03/07/00	Or et al.	514	29	
	A18	6274715 B1	08/14/01	Or et al.	536	7.4	
	A19	6288055 B1	09/11/01	Natarajan et al.	514	210.2	
	A20	6288234 B1	09/11/01	Griffin	546	190	
	A21	6355805 B1	03/12/02	Choi et al.	546	301	
	A22	6355810 B1	03/12/02	Griffin et al.	548	547	
	A23	6362371 B1	03/26/02	Moran et al.	564	365	
	A24	6395724 B1	05/28/02	Judice et al.	514	183	
	A25	6420354 B1	07/16/02	Marquess et al.	514	183	
	A26	6437119 B1	08/20/02	Truett	540	215	
	A27	6446032 B1	09/03/02	Schimmel	703	11	
<b>EXAMINER</b>				<b>DATE CONSIDERED</b>			

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 <b>U.S. PATENT DOCUMENTS</b>									
EXAM INIT.		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE		
	A28	6468979 B1	10/22/02	Pellacini et al.	514	29			
	A29	6479498 B1	11/12/02	Marquess et al.	514	256			
	A30	6566509 B1	05/20/03	Griffin et al.	536	7.4			
	A31	2002/0028943 A1	03/07/02	Griffin	546	223			
	A32	2003/0176670 A1	09/18/03	Griffin et al.	536	7.4			
	A33	2003/0176848 A1	09/18/03	Gibson et al.	604	500			
<b>FOREIGN PATENT DOCUMENTS</b>									
EXAM INIT.		DOCUMENT NUMBER	DATE	COUNTRY CODE	CLASS	SUB CLASS	FILING DATE	ABSTRACT ONLY	ENGLISH LANG (Y/N)
	B1	EP 0 680 967 B1	10/14/98	EP	C07H 17	08		NO	NO (See B2)
	B2	EP 0 680 967 B1	10/14/98	EP				YES	YES
	B3	EP 0 895 999 A1	02/10/99	EP	C07H 17	08		NO	YES
	B4	EP 1 132 392 A1	09/12/01	EP	C07H 17	08		NO	YES
	B5	WO 92/17184	10/15/92	PCT	A61K 31	675		NO	YES
	B6	WO 93/24509	12/09/93	PCT	C07H 17	08		NO	NO (See B7) (English language abstract)
	B7	WO 93/24509	12/09/93	PCT				YES	YES
	B8	WO 93/07154	04/15/93	PCT	C07D 499	88		NO	YES
	B9	WO 94/10185	05/11/94	PCT	C07H 17	08		NO	NO (See B8) (English language abstract)
	B10	WO 94/10185	05/11/94	PCT				YES	YES
	B11	WO 95/07271	03/16/95	PCT	C07D 263	20		NO	YES
	B12	WO 96/18633	06/20/96	PCT	C07H 17	08		NO	YES
	B13	WO 97/35195	09/25/97	PCT	G01N 33	53		NO	YES
	B14	WO 98/56800	12/17/98	PCT	C07H 17	08		NO	YES
	B15	WO 99/28308	06/10/99	PCT	C07D 279	16		NO	YES
<b>EXAMINER</b>				<b>DATE CONSIDERED</b>					

<b>FORM PTO - 1449</b> <b>INFORMATION DISCLOSURE STATEMENT</b>					<b>ATTORNEY DOCKET NO.: RIB-007</b> <b>APPLICANT(S): Wang et al.</b> <b>SERIAL NO.: 10/671,326</b> <b>FILING DATE: 09/25/03</b> <b>GROUP: Not yet assigned</b>				
									
FOREIGN PATENT DOCUMENTS									
EXAM INIT.		DOCUMENT NUMBER	DATE	COUNTRY CODE	CLASS	SUB CLASS	FILING DATE	ABSTRACT ONLY	ENGLISH LANG (Y/N)
	B16	WO 99/33839	07/08/99	PCT	C07D 501	24		NO	YES
	B17	WO 99/63937 A3	12/16/99	PCT	A61K 38	00		NO	YES
	B18	WO 00/06606	02/10/00	PCT	C07N 17	00		NO	YES
	B19	WO 03/070173 A2	08/28/03	PCT	A61K			NO	YES
	B20	WO 03/070174 A2	08/28/03	PCT	A61K			NO	YES
	B21	WO 03/070254 A1	08/28/03	PCT	A61K 31	70		NO	YES
OTHER ART, JOURNAL ARTICLES, ETC.									
EXAM INIT.	OTHER DOCUMENTS: (Including Author, Title, Date, Relevant Pages, Place of Publication)								
	C1	Hanessian et al., "Quantamycin: A Computer-Simulated New-Generation Inhibitor of Bacterial Ribosomal Binding," <u>J. Am Chem. Soc.</u> , 106:6114-6115 (1984)							
	C2	Hecker et al., "Application of Hygromycin a Structure Activity Relationships to the Antibiotic A201A," <u>Bioorganic &amp; Medicinal Chemistry Letters</u> , 3(2):295-298 (1993)							
	C3	Holmes et al., "Novel Dimeric Penicillin Derived Inhibitors of HIV-1 Proteinase: Interaction with the Catalytic Aspartates," <u>Bioorganic &amp; Medicinal Chemistry Letters</u> , 3(4):503-508 (1993)							
	C4	Rao et al., "Tight Binding of a Dimeric Derivative of Vancomycin with Dimeric L-Lys-D-Ala-D-Ala," <u>J. Am Chem. Soc.</u> , 119:10286-10290 (1997)							
	C5	Shuker et al., "Discovering High-Affinity Ligands for Proteins: SAR by NMR," <u>Science</u> , 274 (5292):1531-1543 (2003)							
	C6	Vince et al., "Chloramphenicol Binding Site with Analogues of Chloramphenicol and Puromycin," <u>Antimicrobial Agents and Chemotherapy</u> , 8(4):439-443 (1975)							
	C7	Wang et al., "Dimeric Aminoglycosides: Design, Synthesis and RNA Binding," <u>Bioorganic &amp; Medicinal Chemistry Letters</u> , 7(14):1951-1956 (1997)							
	C8	Welch et al., "An Inhibitor of Ribosomal Peptidyl Transferase Using Transition-State Analogy," <u>Biochemistry</u> , 34(2): pages 385-390 (1995)							
	C9	Zemlicka et al., "Sparsophenicol: A New Synthetic Hybrid Antibiotic Inhibiting Ribosomal Peptide Synthesis," <u>J. Med. Chem.</u> , 25:1123-1125 (1982)							
	C10	Zemlicka et al., "Hybrids of Antibiotics Inhibiting Protein Synthesis. Synthesis and Biological Activity," <u>J. Med. Chem.</u> , 36:1239-1244 (1993)							
<b>EXAMINER</b>					<b>DATE CONSIDERED</b>				

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